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SIMILAR SPECIES OF MIGRATORY WATERBIRDS IN HAWAII

by J. Michael Scott, Robert L. Pyle, and C. Fred Zeillemaker

Many species of migratory waterbirds recorded in Hawaii since 1900 have been reported fewer than ten times and most others can be considered irregular in their occurence (Berger 1972). Except for a few pelagic species from the south Pacific, most of these occasional and accidental visitors to the State breed in northern Asia and northern North America. In a number of cases, two or more species from these areas are very similar in appearance and could easily be confused in the field. This is particularly true for birds in immature, eclipse or winter plumages. Identification of gulls is further complicated by the fact that most birds reaching Hawaii are in immature plumage, and many intergrades between species exist. In fact, on the West Coast of North America as many as 50% of some colonies are intergrades (Hoffman, et al., in press). Many Eurasian species are not depicted in the handbooks used by most field observers in Hawaii. The close similarity of many of these species, their infrequent occurrence in Hawaii, and the lack of a single text which treats the field characters comparatively, make it difficult to arrive at a correct and reliable sight identification of these species in the field. This problem is especially pressing when one of the similar "pair" or "group" is regular in its occurrence while the other is rare, e.g., American Golden Plover vs. Black-bellied Plover; Lesser Scaup vs. Greater Scaup. Such a situation often conditions the observer to "see" the more common species without checking closely for other possibilities.

As an aid to birders in Hawaii, we list below some regular waterbird visitors to Hawaii, each grouped with one or more other similar species which already have or might possibly occur here. Each group of two or more similar species is further categorized as follows:

A. Criteria for separating the species in this group, if any, are not well-known or well-described in any of the basic guidebooks;
B. Some criteria for separating the species in this group are covered in the field guides but better comparative descriptions are needed, including in some cases other criteria not adequately covered; and
C. Criteria for separating the species in this group are covered adequately in Peterson's *Field Guide to Western Birds*, Robbins' *Birds of North America*, Hawaii Audubon Society's *Hawaii's Birds*, or other popular references.

The purpose of this list is simply to alert observers to the possibilities of other species that are similar to the regular and occasional visitors to Hawaii. A complete discussion of criteria found useful in identifying these species, and their historical status as indicated by specimen and photographic evidence, must await a later and more ambitious publication effort. Species groups are separated by a solid line and references we have found useful are identified to the right of each group.

It should be recognized that observational conditions such as rain, glare, poor light, distance to bird, length of observational period, and observer's lack of experience with the species will not permit all birds seen to be identified. Indeed, some of the species can only be distinguished by careful examination of specimens in the hand. Because of their close similarity, the occurrence in Hawaii of many of these similar species should be considered hypothetical until documented by a specimen or diagnostic photograph. Adequate documentation is still lacking for the Hawaii records of a number of

migratory species (Berger 1972). We suggest that records for the migratory species categorized A or B below be documented by a specimen or good photographs whenever possible, and by written notes giving identification criteria and observation conditions. For accidental or very unusual species, the descriptive notes would be welcome for the Hawaii Audubon Society files, and for possible publication in the *'Elepaio*. Copies of diagnostic photographs are solicited for the Rare Bird Documentary Photograph File maintained jointly by Bishop Museum and Hawaii Audubon Society (see *'Elepaio*, March 1977, p. 101).

Abbreviations and symbols: *-recorded in Hawaii; imm-immature; ad-adult; subad-subadult; m-male; f-female; e-eclipse.

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SPECIES	CAT.	IDENT. AIDS
Short-tailed Albatross* (imm) *Diomedea albatrus* Black-footed Albatross* *D. nigripes*	B	6,9,5,18
Sh-tld Albatross* (subad,ad) *D. albatrus* Laysan Albatross* *D. immutabilis*	C	6,9,15,18
Sooty Shearwater* *Puffinus griseus* Short-tailed Shearwater* *P. tenuirostris*	C	4,6,9,15
Wdg-tld Shearwater* (dk phase) *P. pacificus* Christmas Shearwater* *P. nativitatus*	B	3,4,6
Wdg-tld Shearwater* (lt phase) *P. pacificus* Manx (Newell's) Shearwater* *P. puffinus*	B	5,6
Hawaiian Petrel* *Pterodroma phaeopygia* Juan Fernandez Petrel* *P. externa*	B	5,6
Tahiti Petrel *P. rostrata* Phoenix Petrel *P. alba*	B	6
Herald Petrel* *P. arminjoniana* Kermadec Petrel* *P. neglecta*	A	6
Bonin Petrel* *P. hypoleuca* Stejneger's Petrel *P. longirostris* White-winged Petrel *P. leucoptera* Cook's Petrel *P. cooki*	A	4,6
Harcourt's Storm Petrel* *Oceanodroma castro* Leach's Storm Petrel* *O. leucorhoa*	A	6,15
Red-billed Tropicbird* *Phaethon aethereus* Red-tailed Tropicbird* *P. rubricauda* White-tailed Tropicbird* *P. lepturus*	C	5,6
Red-footed Booby* (imm) *Sula sula* Brown Booby* *S. leucogaster*	C	6
Great Frigatebird* (imm) *Fregata minor* Lesser Frigatebird* (imm) *F. ariel*	B	6,7
Snowy Egret *Egretta thula* Little Egret *E. garzetta* Cattle Egret *Bubulcus ibis* Little Blue Heron* (imm) *Florida caerulea*	A	3,8,14,15, 20,21,22,23, 24

SPECIES	CAT.	IDENT. AIDS
Reef Heron (white phase) *Egretta schistacea* Chinese Egret *E. eulophotes* Plumed Egret *E. intermedia* Great Egret* *E. alba*		
Glossy Ibis *Plegadis falcinellus* White-faced Ibis* *P. chihi*	B	14,19
Mallard* (f,em) *Anas platyrhynchos* Hawaiian Duck* *A. wyvilliana*	C	5,26
Cinnamon Teal* (f,em) *A. cyanoptera* Blue-winged Teal* (f,em) *A. discors* Garganey* (f,em) *A. querquedula*	B	10,12,15, 21,22
Green-winged Teal* (f,em) *A. crecca* Baikal Teal (f,em) *A. formosa* Falcated Teal (f,em) *A. falcata*	B	12,15,21,22, 26
European Wigeon* (f,em) *A. penelope* American Wigeon* (f,em) *A. americana*	C	12,15,20,26
Ring-necked Duck* *Aythya collaris* Tufted Duck* *A. fuligula* Greater Scaup* *A. marila* Lesser Scaup* *A. affinis*	B	12,15,20,26
American Golden Plover* *Pluvialis dominica* Black-bellied Plover* *P. squatarola*	C	15,20
Common Ringed Plover *Charadrius hiaticula* Semipalmated Plover* *C. semipalmatus* Long-billed Ringed Plover *C. placidus* Little Ringed Plover *C. dubius*	A	15,20,21, 22,23,24
Snowy Plover* *C. alexandrinus* Collared Plover *C. collaris* Wilson's Plover *C. wilsonia* Mongolian Plover* *C. mongolus* Greater Sandplover *C. leschenaultii*		
Ruddy Turnstone* *Arenaria interpres* Black Turnstone *A. melanocephala* Surfbird *Aphriza virgata*	C	15,20
Whimbrel* *Numenius phaeopus* Bristle-thighed Curlew* *N. tahitiensis* Slender-billed Curlew *N. tenuirostris* Eurasian Curlew *N. arquata* Eastern Curlew *N. madagascariensis* Long-billed Curlew *N. americanus*	C	15,20,21, 22,23,24
Black-tailed Godwit *Limosa limosa* Hudsonian Godwit *L. haemastica* Bar-tailed Godwit* *L. lapponica* Marbled Godwit* *L. fedoa*	C	15,20,21, 22,23,24
Greater Yellowlegs* *Tringa melanoleucas* Lesser Yellowlegs* *T. flavipes*	C	15,20
Green Sandpiper *T. ochropus* Wood Sandpiper* *T. glareola*	B	15,20,21, 22,23,24
Common Sandpiper *Actitis hypoleucos* Spotted Sandpiper *A. macularia*	A	15,20,21, 23,24
Gray-tld (Polynesian) Tattler* *Heteroscelus brevipes* Wandering Tattler* *H. incanus*	A	3,15

SPECIES	CAT.	IDENT. AIDS
Long-billed Dowitcher* *Limnodromus scolopaceus*	B	15,17,23
Short-billed Dowitcher* *L. griseus*		
Asiatic Dowitcher *L. semipalmatus*		
Pectoral Sandpiper* *Calidris melanotos*	B	15,20
Sharp-tailed Sandpiper* *C. acuminata*		
Red Knot* *C. canutus*	A	15,20,23, 24
Great Knot *C. tenuirostris*		
Semipalmated Sandpiper *C. pusillus*	A	15,16,20, 21,22,24
Western Sandpiper* *C. mauri*		
Rufous-necked Sandpiper *C. ruficollis*		
Little Stint *C. minuta*		
Temminck's Stint *C. temminckii*		
Long-toed Stint* *C. subminuta*		
Least Sandpiper* *C. minutilla*		
Baird's Sandpiper* *C. bairdii*		
Broad-billed Sandpiper *Limicola falcinellus*		
Solitary Snipe *Capella solitaria*	C	15,20,21, 22,23,24
Pintail Snipe* *C. stenura*		
Swinhoe's (Marsh) Snipe *C. megala*		
Common Snipe* *C. gallinago*		
Pomarine Jaeger* (imm) *Stercorarius pomarinus*	B	9,15,17
Parasitic Jaeger (imm) *S. parasiticus*		
Long-tailed Jaeger (imm) *S. longicaudus*		
Glaucous Gull* *Larus hyperboreus*	C	13,15,20
Glaucous-winged Gull* *L. glaucescens*		
Black-tailed Gull *L. crassirostris*	C	13,15,18, 20,21,22, 24
Lesser Black-backed Gull *L. fuscus*		
Western Gull* *L. occidentalis*		
Slaty-backed Gull* *L. schistisagus*		
Ring-billed Gull* *L. delawarensis*	B	15,17,20
Mew Gull *L. canus*		
Herring Gull* *L. argentatus*		
Thayer's Gull *L. thayeri*		
California Gull* *L. californicus*		
Laughing Gull* *L. atricilla*	B	15,17,20,23
Franklin's Gull* *L. pipixcan*		
Black-headed Gull* *L. ridibundus*	C	15,20,21, 22,23,24
Bonaparte's Gull* *L. philadelphia*		
Black-legged Kittiwake* *Rissa tridactyla*	C	15,20
Red-legged Kittiwake *R. brevirostris*		
Australian Fairy Tern *Sterna nereis*	A	8,15
Peruvian Tern *S. lorata*		
Least Tern* *S. albifrons*		
Common Tern* *S. hirundo*	B	9,15,25
Arctic Tern* *S. paradisaea*		
Forster's Tern *S. forsteri*		
Black-naped Tern *S. sumatrana*		
Roseate Tern *S. dougallii*		
Gray-backed Tern* *S. lunata*	A	15,20,23
Bridled Tern *S. anaethetus*		
Sooty Tern* *S. fuscata*		
Black Tern *Chlidonias niger*	B	3,6,15, 20,23
White-winged Black Tern *C. leucopterus*		

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LISA CROFT AWARDED SHUSTER SCHOLARSHIP

Lisa Croft, an undergraduate botany major at the University of Hawaii, Manoa, was awarded the Rose Shuster Taylor Scholarship. This award of one year's tuition at the University is granted each year by Hawaii Audubon Society to a promising student of Hawaiian natural history. Ms. Croft is uniquely qualified, having been the leader of the NSF sponsored undergraduate research team that productively studied the South Kona rain forests on the Big Island last summer. She is presently an intern in the undergraduate cooperative program of the U.S. Forest Service with the Departments of Zoology and Botany at the University.

GLEANINGS FROM THE TECHNICAL LITERATURE

THE ROOF RAT'S ROLE IN HAWAIIAN EXTINCTION

A reassessment of factors, particularly *Rattus rattus* L., that influenced the decline of endemic forest birds in the Hawaiian Islands.

by I. A. E. Atkinson
Pacific Science 31:109-133, 1978

The unfortunate decline of Hawaii's native forest birds over historic times has attracted the attention of a variety of naturalists, from early writers, such as Perkins and Munro, to the present. In this article Atkinson, a New Zealander well versed in the history and problems of birds in his own island nation, compiles compelling evidence that the roof rat (*Rattus rattus*) deserves more blame than it has previously been given for the sad state of the Hawaiian avifauna today.

The roof rat, also called the black rat in one of its forms, has spread with man from its original home in Europe. It prospers especially in warm climates, more so than the Norway rat (*R. norvegicus*), the other rat species commonly associated with man. Unlike the Norway rat, it is an active and agile climber, and it damages coconut fruits even more than the Polynesian rat (*R. exulans*), which came to Hawaii with the Polynesian people. All three rats can cause severe damage to sugar cane. The roof rat has proven its capabilities of damaging forest bird populations on Lord Howe Island, in the southwestern Pacific Ocean off Australia, and on Big South Cape Island, off New Zealand. On both these islands forest bird populations declined dramatically shortly after the roof rat's arrival.

The spread of roof and Norway rats around the world shows an interesting interplay between the two. Roof rats were abundant in Europe and by 1544 reached North America, where they soon became common. Around 1725 in Europe and after 1775 in North America, Norway rat populations took over, and roof rat populations declined. Later, for unexplained reasons, in the 30 years after 1860 the roof rat again became the dominant shipboard rat. During this time it began its spread in New Zealand.

Needless to say, the roof rat's arrival in Hawaii was not marked with a great aloha. In fact, no one noticed, and the exact time can only be inferred. The abundance of roof rats on ships after 1860 would make that a likely time for its introduction. We have a good indication that the roof rat was absent in 1840, when Peale failed to find it here, and proof that it was present in 1899, when a specimen was collected and deposited in a museum. Atkinson's careful reading of published naturalists' accounts finds evidence that an arboreal rat, which we now know must have been the roof rat, was a new addition to the Hawaiian scene in the years following 1870. Perkins noted the destruction of 'ie'ie fruit on Oahu; Baldwin, the destruction of tree snails; Bryan, the damage to coconut fruits. Palmer and Perkins both noted high numbers of rats, frequent sightings in trees, and frequent sightings during daylight. This last observation is an indication of a population explosion of rats. A story that the small Indian mongoose (*Herpestes auropunctatus*), introduced in 1883, drove the rats into the trees again indicates that rats became arboreal, or rather, an arboreal rat became common, following that date. The mongoose was initially successful in reducing rat damage in cane fields, but some five years later it was apparently not as effective, indicating the rats may have changed habits, or more likely, the species composition had changed. Today roof rats still damage cane even where mongooses occur. From these various lines of evidence Atkinson concludes that roof rats arrived on Oahu in the 1870's or early 1880's and then took 10 to 15 years to spread to the other islands. Oahu had the most ship traffic and the only wharf facilities before 1897. When wharves were built on the other islands, on Hawaii in 1897 and lastly on Lanai in 1926, rats could have deserted ships more easily.

Observations by these same and other naturalists led Atkinson to conclude that Hawaiian forest bird populations did not just steadily decline over the last two centuries but suffered a period of accelerated decline in the late 1800's and early 1900's. Specifically, by tabulating comments on species abundances on each island, he found that a dramatic decline occurred at some time during the years 1873-1887 on Oahu, 1892-1896 on western Hawaii, 1893-1907 on Molokai, 1894-1901 on Maui, 1896-1900 (and beyond?) on eastern Hawaii, 1900-1920 on Kauai, and 1926-1932 on Lanai. These time periods are of necessity longer than the actual periods of

accelerated decline, since observers were not present or published records sporadically. The author acknowledges that these dates are quite tentative, due to the lack of observations and suggests in a personal communication to C. J. Ralph that digging into newspapers, magazines, and unpublished journals could help delineate better the timing of bird declines and rat abundances.

Even given the tentative nature of the periods of dramatic bird declines, they coincide with the times that roof rats probably reached the islands and built up in numbers. Coupled with the roof rat's known capability of destroying forest birds, this coincidence certainly incriminates the rat.

Other factors that probably have contributed to some extent to the decline of the birds cannot explain the general, accelerated decline the author proposes happened in this time period. Habitat destruction by man and forest alteration by cattle, goats, and pigs began much earlier, with the Polynesians and then the Europeans, and in fact, birds had disappeared from forests that appeared intact to the observers of the time. Norway and Polynesian rats, possible predators or competitors for food, also were abundant well before the late 1800's. Most exotic forest birds, such as the Japanese White-eye and the Red-billed Leiothrix, which could compete with the native birds, were introduced well after the decline, in the 1900's. An exception is the Common Myna. The extent of its invasion of the forests is not well documented, although perhaps significant. The reduction of the native insect fauna by introduced parasites and predators could possibly have hurt the native birds, but its timing is uncertain, and it seems unlikely to have affected birds of all different dietary preferences, including nectivores and frugivores. Bird pox was noted in native birds well before the decline, and the mosquito vector for bird malaria was introduced about 1826 and was widespread and abundant by 1857, so these diseases were not new factors in the late 1800's and early 1900's. Furthermore, extinctions have occurred in high elevation forests, despite the fact that the mosquito does not normally reach them. Among mammalian predators, man, the feral cat, the Polynesian rat, and the house mouse (*Mus musculus*) were present long before the period in question. The mongoose was intorduced first in 1883 on the Hamakua coast of the Big Island. No studies of its food habits in forests have been published, but it is known to be a poor climber, so it is an unlikely predator of many of the tree-dwelling birds. The decline of birds on Kauai, where there was no mongoose, also argues against this species as the cause of the decline elsewhere.

Since the introduction of the roof rat coincided with the dramatic decline of birds, and no other new factor perturbed the island ecosystems in a way likely to damage birds at that time, Atkinson suggests "that the stepwise decline of endemic forest birds that occurred island by island in the Hawaiian groups between 1870 and 1930 was also the result of a series of roof rat irruptions that followed the invasion and establishment of this rat on each island in turn. The invasion and irruption of roof rats on the Midway Islands in 1943, which was followed by the loss of the Laysan rail and a population of Laysan finches, can be seen as the most recent step in the spread of the roof rat throughout the Hawaiian Islands."

The effects of these rats might not be obvious to a naturalist studying the Hawaiian forests today, since the rats might do their real damage only during their population outbreaks. The rats in New Zealand and Hawaii undergo such population cycles. The damage done by the rat outbreaks is perhaps exacerbated by the subsequent increase in population of feral cats. Thus the effect of the rats could be in part indirect and difficult to detect. Despite these difficulties, Atkinson's scholarly work certainly should inspire long term field studies of roof rats in Hawaiian forests by those parties hoping to save what is left of our native avifauna.

C. P. Ralph

A rat feeding in a kiawe tree. Arboreal habits of the roof rat might have enabled it to play a role in extinctions.

--Ahuimanu Photo by Robert J. Shallenberger

SEPARATION OF TATTLERS AND SNIPE

by Daniel D. Gibson

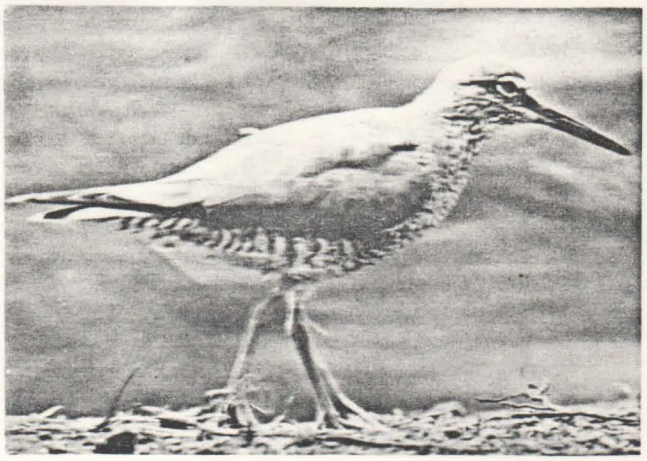
Birders in Hawaii should be aware of and on the lookout for a tattler other than the regular visitor, the Wandering Tattler (*Heteroscelus incanus*), as well as two races of snipe. The only substantiated record of the Polynesian Tattler (*H. brevipes*) is on Midway in 1964 (Berger, "Hawaiian Birdlife" 1972:243). The North American race of the Common Snipe (*Capella gallinago delicata*) has been reported several times, although without specimens or verifying descriptions (Berger, loc. cit.), while the Asian race (*C.g. gallinago*) never has. As described here, the tattlers and the snipe can be distinguished in the field, although the field guides do not tell how.

The Polynesian Tattler (*H. brevipes*) may be separated from the Wandering Tattler (*H. incanus*) in spring by the overall paler gray of the plumage of the former, including paler and finer ventral barring (reminding me of the chest vermiculations of an adult Northern Shrike, though in that species they are darker and finer yet). In most *brevipes* the fore-eye stripe is unblemished white, or virtually so, and in the spring birds I have examined, these fore-eye stripes meet over the bill in a clean unbroken white line from eye to eye.

H. incanus, by comparison, is quite dark gray throughout the gray areas of the plumage, and the ventral barring is broad and similarly dark. Many *incanus* have a tendency toward the trans-bill stripe, but it is always densely shot with dark gray, if present at all, and usually the fore-eye stripes of *incanus* are completely interrupted by solid gray from bill to crown.

The amount of ventral barring in *incanus* is quite variable, some birds apparently failing to complete the molt into breeding plumage; thus one sees small numbers of spring *incanus* with little or no barring in mid-breast, on the belly, or on the undertail coverts. These birds thus generally resemble *brevipes*, but the barring on the upper breast and flanks of such birds is like that of other *incanus*, broad and dark.

I understand that the vocalizations are noticeably different, that *brevipes* has a call sufficiently different that it may be picked from a flock of *incanus* at once (and, indeed, I know of specimens that were collected on that basis and are surely *brevipes*, by nasal groove length and tarsi). I methodically flushed all of the many tattlers I saw in the western Aleutians last fall, at which season



Which tattler? This spring plumaged Wandering Tattler was photographed on Oahu, but the Polynesian Tattler may be overlooked by observers in the islands.
--Ahuimanu Photo by Robert J. Shallenberger

they are inseparable by plumage criteria, waiting to hear a 'different' call, but I had to presume that all were *incanus*; the only *brevipes* I have seen in life was a silent spring bird.

As to the Hawaii records of Common Snipe, North American *C.g. delicata* is listed as accidental in Hawaii in the fifth AOU Checklist, but does nominate *C.g. gallinago* occur? We have found in recent years that the nominate race is a regular passage bird in the western Aleutian Islands, where it may breed in some years; *delicata* occurs throughout mainland Alaska, of course, but it is unknown in the Aleutians west of the easternmost islands. Thus throughout much of the Aleutian Chain there are no snipe. In this part of the world the two races are reasonably easy to differentiate, the cline beginning in North America and apparently working east, leaving the eastern Asia birds and the Alaska birds as distinct from one another as examples of these races ever become: Nominate *gallinago* has broad, buffy feather edging on dorsum, compared with *delicata*'s narrow, white or whitish feather edging. *C.g. delicata* is much blacker, less brown, dorsally. If performing courtship flights (which is unlikely in Hawaii), they are instantly recognizable from one another, nominate *gallinago*'s flight noise being three octaves lower-pitched than that of *delicata*.

I hope this information on the tattlers and snipe will be of some help to Hawaiian field observers.

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EMPEROR GEESE ON BIG ISLAND

Two Emperor Geese (*Philacte canagica*) were sighted by Marion Shlaudeman and identified by the author at Anaehoomalu, South Kona District, Island of Hawaii. They were observed from 2 to 4 p.m. April 16; 2 to 5 p.m. April 19; and again from the air at 11:30 a.m. on April 20, 1978.

They were resting on a sand bar in the salt water tidal lagoon, and they fed by dabbling in the shallow water for 15 to 20 minutes at a time.

They were not banded and appeared to be in good condition, with full pectoral area development. There was no evidence of weakness or injury.

When approached within 8 feet for a photograph (Fig. 1), the geese flew and circled the area for five minutes before landing on another sand bar in the lagoon.

The pictures have been placed in the Hawaii Audubon Society Rare Bird Documentary Photograph File in the Bishop Museum. The camera used was a Leicaflex SL, 50 mm lens, with Kodacolor 100 film.

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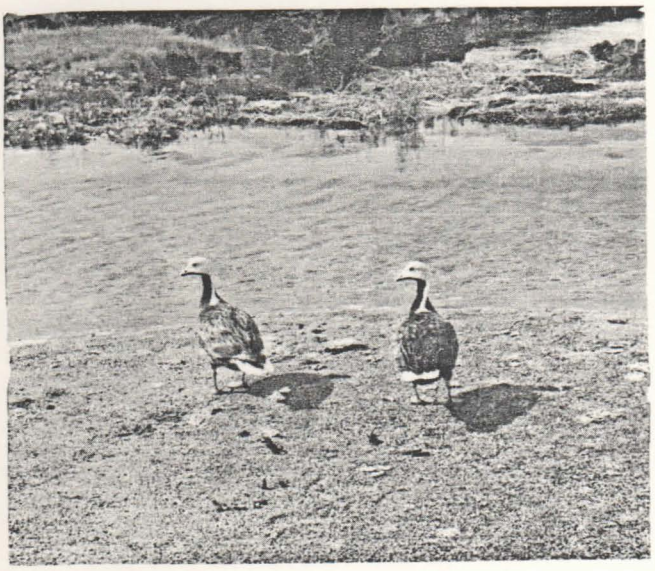

Fig. 1. Emperor Geese photographed on April 19, 1978 at Anaehoomalu, South Kona, Island of Hawaii.

Photo by the Author

HAWAII AUDUBON SOCIETY GRANTS

The Hawaii Audubon Society will award grants for research in Hawaiian or Pacific natural history. Deadline for applications is September 1.

Because awards generally do not exceed $500, proposed projects are expected to be on a small scale or to receive funding from sources other than the Society. The Society will cooperate with other agencies or organizations to fund research that it cannot fund in its entirety. Applicants are encouraged to facilitate such cooperation between potential funding sources.

Proposals will include: statement of problem(s) and objective(s); materials and methods; budget; curriculum vitae; and at least two letters of recommendation. All material must be received prior to the deadline.

For further information write to Sheila Conant, Scholarship and Grant Committee, Hawaii Audubon Society, P.O. Box 22832, Honolulu 96822.

ALOHA TO NEW MEMBERS

We welcome the following new members and encourage them to join in our activities.

Regular: American Federation of Aviculture (Milton Bergthold), Honolulu; Betty Joao, Waipahu; Nancy Shiraishi, Honolulu; Theresa Wong, Honolulu.

Junior: Ann Dunmire, Hilo; Ms. Terrell Jones, Burlington, VT; Mark Purnell, Ft. Shafter.

Subscriber: Paul Bush, Fresno, CA; William Carr, Reseda, CA; Fred Hazeltine, Seattle, WA; Phelps Hobart, Orangevale, CA, Walter Nichols, Pasadena, CA; Helen Scantlin, La Jolla, CA; Marion Shlaudeman, Altadena, CA; John Tomer, Tulsa, OK.

DONATIONS

MAHALO NUI LOA to the following members who have generously sent donations, ranging from $2.00 to $75.00, to the Society: William Carr, Patrick Dunbar, J. Brent Giezentanner.

'I'IWI AT LOW ELEVATIONS?

by L. M. Thomas

On January 13, 1978, while on the Hawaii Audubon Society field trip along the Old Pali Road (Likeke Trail), we encountered and heard many exotic birds ('Elepaio, Jan. 1978, p. 79). After reaching the trail's end, I returned ahead of the group to the area where everyone had parked.

At 10:05 a.m., while I was calling Shama (*Copsychus malabaricus*) down by the stream on the makai side of the road's wall, a sight occurred that I will never forget. A quick flickering sound drew my attention to the left side of the stream about 6-8 yards from me at a height of maybe three and a half feet above the ground. I observed an 'I'iwi (*Vestiaria coccinea*), a bright crimson-bodied bird about five to five and a half inches in size, with black wings and a few white feathers close to the wing base. It had a pinkish-red, long, decurved bill that distinguished it completely from a Northern Cardinal (*Cardinalis cardinalis*) or any other introduced bird. The 'I'iwi flew straight at me out of the Kukui *(Aleurites moluccana)* trees and in their underbrush, presumably unaware of my presence, until I moved in to get a better look. It then receeded back from where it had flown out. The whole occurrence lasted no more than fifteen seconds.

Going back up to the cars, I saw the group coming down, and I told Tim Burr and Dr. Shallenberger of my sighting. Sensing their skepticism, I told them of other sightings of the 'I'iwi by my wife and me in the Sacred Falls area in Punaluu near the Hauula border. Tim followed me back to the stream and watched with binoculars while I called the Shamas to us, hoping the 'I'iwi would return.

Some weeks later I talked to Dr. Andrew Berger at the University of Hawaii and told him of my sightings and other experiences with this drepanid. He stated that it is possible for such a lowland sighting, but it should be confirmed. These and other sightings took place over a period of months between July 1974 and January 1975 on five different occasions in the early hours of the morning and in the evening before sunset, behind my cottage about 100 yards mauka of Kamehameha Highway on the Hauula side of Sacred Falls. 'I'iwi would come usually when it was overcast and drizzling. Anywhere from one to three at a time would alight on a Hala tree *(Pandanus odoratissimus)* approximately ten feet from the house. We would often rise early and look out from the kitchen window to admire the beauty of nature at these times.

I must admit that prior to these earlier sightings, which fit the description in characteristics of the bird I observed on January 13, we had not much knowledge of these unique honeycreepers. However, now the study of the Drepanididae is my hobby and as a Scientific Illustrator at the Bishop Museum, I have spent many hours in our bird room illustrating and studying them. I am convinced that the sightings mentioned above are valid.

B. P. Bishop Museum
Honolulu, Hawaii 96818

COMMENT BY DR. SHALLENBERGER

"I encouraged Mr. Thomas to submit an article on his sightings to the 'Elepaio in the hope that it would stimulate investigation by others. Despite my skepticism at the time of the Old Pali Road hike, there is some precedent in the literature regarding low elevation sightings of 'I'iwi on Oahu. Perkins (1903) noted that the 'I'iwi on Oahu "is now less abundant than on the other islands, but it still exists even in the mountains in the immediate vicinity of Honolulu, although rare. Further away from the city it is common enough in both the mountain ranges". Seale (1900) collected an adult 'I'iwi at 1300' in 'ohi'a forest of Waiolani Mountain. (This was probably Waiolani Ridge above Alewa Heights and Kamehmeha School.) In Wilson and Evans (1890-1899), 'I'iwi were reported to be seen frequently at sea level where they were driven by high winds. However, 'Elepaio records (1939-1978) for 'I'iwi include no sightings below 1600', and most were above 2000'. Further, since November, 1976, on more than 250 man-days of bird surveys in the forests of Oahu, 'I'iwi were observed in South and North Halawa Valleys, Schofield-Waikane Trail, and the Poamoho Trail in the Koolau Range. It was also seen below Mt. Kaala in the Waianae Range. None of these birds (approximately 10-15 in the Koolaus, and 15 in the Waianaes) were observed below 1400' in elevation. Although Mr. Thomas' house in Hauula is near sea level, it is only a mile makai of the forest above 1300' in elevation. In my opinion, the continuity of 'ohi'a forest from the Koolau summit to the Sacred Falls area makes sightings of 'I'iwi in this location more likely than in the exotic forest of the Old Pali Road. But, as the man says, "Anything is possible". So let's all go take a look!"

SCIENTISTS STUDYING MONK SEAL DEATHS

Excerpted from an article by Helen Altonn
Honolulu Star-Bulletin, May 18, 1978

The mysterious death of Hawaiian monk seals on Laysan Island is under study by a team of Mainland scientists...

The monk seal is on the U.S. list of endangered species.

Craig Harrison, seabird biologist at the Honolulu office of the Fish and Wildlife Service, accompanied the investigating group on the research vessel Easy Rider...

Harrison said the deaths of the monk seals were reported by Brian and Pattie Johnson, part of a force of wildlife specialists conducting an intensive study of the seals in the refuge area.

He said about 16 or more seals were found dead on Laysan.

It's difficult to estimate the extent of the deaths because the animals could die and easily be washed offshore, he said.

"At this point, it's not really clear what the problem is," Harrison said. He said the scientists took extensive blood, virus and bacteriology samples for laboratory studies.

Autopsies were done on several seals, he said.

He said the group also went to Lisianski Island, but the highest mortality of seals appears to be on Laysan.

Although he was along to do work on birds, Harrison said, "I was very impressed that the seals looked a lot healthier on Lisianski than on Laysan.

He said the seals on Laysan "are very thin, with not much blubber, and internally have a lot of parasites."

However, he said presence of parasites isn't alarming because "they can take over after an animal is weak from another reason."

He said the research group "was afraid it might be something contagious, but they seem to have rejected that."

The problem possibly could be a fluctuation of the food supply, he said. "At this point, they're waiting to draw any real conclusions until all the laboratory work is done...

"As far as I could tell, the birds out there are just fine," he said, adding that there is no evidence of the virus that affected gooney birds on Midway Island last month.

Hundreds of gooneys were killed by the virus, similar to the one that causes smallpox in humans and pox infections in domestic animals.

But Harrison said it appeared to be localized and "the chicks managed to recover."

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Donor	250.00
Life	1000.00
Student	8.50

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Junior (18 and under)	1.00
Subscriber (non-Hawaii residents)	3.00
Life Member	100.00

(payable in $25 annual installments)

PUBLICATIONS OF THE SOCIETY

HAWAII'S BIRDS by the Society (1975). This is the best field guide to our birds, and includes colored illustrations of all native and well-established exotic species.
(Postpaid, add 27¢ for airmail)..... $3.30

FIELD CHECK-LIST OF BIRDS OF HAWAII by R. L. Pyle (1976). A pocket-size field card listing the species recorded in Hawaii with space for notes of field trips.
(Postpaid). 25
(ten or more, 10¢ per copy)

GUIDE TO HAWAIIAN BIRDING by members of Society and edited by C. J. Ralph (1977). Where to go and some idea of what you are likely to see. For the islands of Hawaii, Maui, Molokai, Lanai, Oahu, and Kauai.
(Postpaid). 50

PRELIMINARY LIST OF THE BIRDS OF HAWAII by R. L. Pyle (1977). An authoritative compilation of all species naturally occurring in Hawaii as well as those introduced by man currently established as viable populations. Gives an excellent summary of each species' status.
(Postpaid). $1.00

HAWAII AUDUBON SCHEDULE OF EVENTS

July 3. Board meeting at the Pyles' home, 741 N.Kalaheo (262-4046), 7 p.m. All welcome.

July 9. Field trip. Destination and leader to be determined. Meet at Hawaii State Library on Punchbowl Street at 7 a.m.

July 10. General meeting. Mr. William Haney will return to Honolulu this month to present his delayed talk, "The Birds of Paradise and Use of Their Plumage", an informative slide show concerning his research in New Guinea. 7:30 p.m., Waikiki Aquarium Auditorium.

August 13. Field trip to Manana(Rabbit) Island. Make reservations with Larry Hirai, (531-2907), by July 31. First preference to members. Boat cost under $5/person, paid at dockside; have exact amount. Meet at Makai Range Pier, 7:00 a.m. Limit of 24. Swimming ability required; must climb in/out of boat in chest-deep swells. Protect equipment with plastic. Trip depends on availability of boat and pilot, Fish and Game permission, and weather and sea conditions.

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